03 co #6

OIPE

RAW SEQUENCE LISTING DATE: 02/10/2002
PATENT APPLICATION: US/09/920,068A TIME: 13:06:11

Input Set : A:\50125.015002.SEQLIST.TXT
Output Set: N:\CRF3\02102002\I920068A.raw

P.5

ENTERED

<110> APPLICANT: Wolf, Eckhard
Werner, Sabine
Halle, Jorn-Peter
Regenbogen, Johannes
Goppelt, Andreas
<120> TITLE OF INVENTION: Polypeptides or Nucleic Acids Encoding These of a Family of G-Protein Coupled Receptors and their Use for the Diagnosis or Treatment of Disorders, for example Skin Disorders and their Use for the Identification of Pharmacologically Active Substances
<130> FILE REFERENCE: 50125/015002
<140> CURRENT APPLICATION NUMBER: 09/920,068A
<141> CURRENT FILING DATE: 2001-08-01
<150> PRIOR APPLICATION NUMBER: 60/229,501
<151> PRIOR FILING DATE: 2000-08-31
<150> PRIOR APPLICATION NUMBER: DE 10038111.1
<151> PRIOR FILING DATE: 2000-08-04
<160> NUMBER OF SEQ ID NOS: 21
<170> SOFTWARE: FastSEQ for Windows Version 4.0
<210> SEQ ID NO: 1
<211> LENGTH: 331
<212> TYPE: PRT
<213> ORGANISM: Mus musculus
<400> SEQUENCE: 1

```
Met Gly Glu Ser Asn Gly Glu Ala Phe Leu Ala Phe Lys Thr Ser Ala
 1               5                  10                  15
Ser Pro Thr Ala Pro Val Thr Thr Asn Pro Met Asp Glu Thr Leu Pro
            20                  25                  30
Gly Ser Ile Asn Ile Arg Ile Leu Ile Pro Lys Leu Met Ile Ile Ile
        35                  40                  45
Phe Gly Leu Val Gly Leu Met Gly Asn Ala Ile Val Phe Trp Leu Leu
    50                  55                  60
Gly Phe His Leu Arg Arg Asn Ala Phe Ser Val Tyr Ile Leu Asn Leu
65                  70                  75                  80
Ala Leu Ala Asp Phe Leu Phe Leu Leu Ser Ser Ile Ile Ala Ser Thr
                85                  90                  95
Leu Phe Leu Leu Lys Val Ser Tyr Leu Ser Ile Ile Phe His Leu Cys
            100                 105                 110
Phe Asn Thr Ile Met Met Val Val Tyr Ile Thr Gly Ile Ser Met Leu
        115                 120                 125
Ser Ala Ile Ser Thr Glu Cys Cys Leu Ser Val Leu Cys Pro Thr Trp
    130                 135                 140
Tyr Arg Cys His Arg Pro Val His Thr Ser Thr Val Met Cys Ala Val
```

RAW SEQUENCE LISTING DATE: 02/10/2002
PATENT APPLICATION: US/09/920,068A TIME: 13:06:11

Input Set : A:\50125.015002.SEQLIST.TXT
Output Set: N:\CRF3\02102002\I920068A.raw

```
57 145                 150                 155                 160
58 Ile Trp Val Leu Ser Leu Leu Ile Cys Ile Leu Asn Ser Tyr Phe Cys
59                 165                 170                 175
60 Ala Val Leu His Thr Arg Tyr Asp Asn Asp Asn Glu Cys Leu Ala Thr
61             180                 185                 190
62 Asn Ile Phe Thr Ala Ser Tyr Met Ile Phe Leu Leu Val Val Leu Cys
63         195                 200                 205
64 Leu Ser Ser Leu Ala Leu Leu Ala Arg Leu Phe Cys Gly Ala Gly Gln
65     210                 215                 220
66 Met Lys Leu Thr Arg Phe His Val Thr Ile Leu Leu Thr Leu Leu Val
67 225                 230                 235                 240
68 Phe Leu Leu Cys Gly Leu Pro Phe Val Ile Tyr Cys Ile Leu Leu Phe
69                 245                 250                 255
70 Lys Ile Lys Asp Asp Phe His Val Leu Asp Val Asn Leu Tyr Leu Ala
71             260                 265                 270
72 Leu Glu Val Leu Thr Ala Ile Asn Ser Cys Ala Asn Pro Ile Ile Tyr
73         275                 280                 285
74 Phe Phe Val Gly Ser Phe Arg His Gln Leu Lys His Gln Thr Leu Lys
75     290                 295                 300
76 Met Val Leu Gln Ser Ala Leu Gln Asp Thr Pro Glu Thr Ala Glu Asn
77 305                 310                 315                 320
78 Met Val Glu Met Ser Ser Asn Lys Ala Glu Pro
79                 325                 330
82 <210> SEQ ID NO: 2
83 <211> LENGTH: 321
84 <212> TYPE: PRT
85 <213> ORGANISM: Homo sapiens
87 <400> SEQUENCE: 2
88 Met Asn Gln Thr Leu Asn Ser Ser Gly Thr Val Glu Ser Ala Leu Asn
89  1               5                  10                  15
90 Tyr Ser Arg Gly Ser Thr Val His Thr Ala Tyr Leu Val Leu Ser Ser
91             20                  25                  30
92 Leu Ala Met Phe Thr Cys Leu Cys Gly Met Ala Gly Asn Ser Met Val
93         35                  40                  45
94 Ile Trp Leu Leu Gly Phe Arg Met His Arg Asn Pro Phe Cys Ile Tyr
95     50                  55                  60
96 Ile Leu Asn Leu Ala Ala Ala Asp Leu Leu Phe Leu Phe Ser Met Ala
97 65                  70                  75                  80
98 Ser Thr Leu Ser Leu Glu Thr Gln Pro Leu Val Asn Thr Thr Asp Lys
99                 85                  90                  95
100 Val His Glu Leu Met Lys Arg Leu Met Tyr Phe Ala Tyr Thr Val Gly
101             100                 105                 110
102 Leu Ser Leu Leu Thr Ala Ile Ser Thr Gln Arg Cys Leu Ser Val Leu
103         115                 120                 125
104 Phe Pro Ile Trp Phe Lys Cys His Arg Pro Arg His Leu Ser Ala Trp
105     130                 135                 140
106 Val Cys Gly Leu Leu Trp Thr Leu Cys Leu Leu Met Asn Gly Leu Thr
107 145                 150                 155                 160
108 Ser Ser Phe Cys Ser Lys Phe Leu Lys Phe Asn Glu Asp Arg Cys Phe
```

RAW SEQUENCE LISTING DATE: 02/10/2002
PATENT APPLICATION: US/09/920,068A TIME: 13:06:11

Input Set : A:\50125.015002.SEQLIST.TXT
Output Set: N:\CRF3\02102002\I920068A.raw

```
109                 165                 170                 175
110 Arg Val Asp Met Val Gln Ala Ala Leu Ile Met Gly Val Leu Thr Pro
111             180                 185                 190
112 Val Met Thr Leu Ser Ser Leu Thr Leu Phe Val Trp Val Arg Arg Ser
113         195                 200                 205
114 Ser Gln Gln Trp Arg Arg Gln Pro Thr Arg Leu Phe Val Val Val Leu
115     210                 215                 220
116 Ala Ser Val Leu Val Phe Leu Ile Cys Ser Leu Pro Leu Ser Ile Tyr
117 225                 230                 235                 240
118 Trp Phe Val Leu Tyr Trp Leu Ser Leu Pro Pro Glu Met Gln Val Leu
119                 245                 250                 255
120 Cys Phe Ser Leu Ser Arg Leu Ser Ser Ser Val Ser Ser Ser Ala Asn
121             260                 265                 270
122 Pro Val Ile Tyr Phe Leu Val Gly Ser Arg Arg Ser His Arg Leu Pro
123         275                 280                 285
124 Thr Arg Ser Leu Gly Thr Val Leu Gln Gln Ala Leu Arg Glu Glu Pro
125     290                 295                 300
126 Glu Leu Glu Gly Gly Glu Thr Pro Thr Val Gly Thr Asn Glu Met Gly
127 305                 310                 315                 320
128 Ala
132 <210> SEQ ID NO: 3
133 <211> LENGTH: 325
134 <212> TYPE: PRT
135 <213> ORGANISM: Mus musculus
137 <400> SEQUENCE: 3
138 Met Asp Ile Asp Ile Ser Ser Leu Gly Ile Tyr Ile Ile Ala Pro Asn
139  1               5                  10                  15
140 Gly Ser Ser Tyr Thr Asn Ser Val Asp Cys Phe Phe Lys Ile Gln Val
141             20                  25                  30
142 Met Gly Phe Leu Ser Leu Ile Ile Ser Pro Val Gly Met Val Leu Asn
143         35                  40                  45
144 Ser Thr Val Leu Trp Phe Leu Gly Phe Gln Ile Arg Arg Asn Ala Phe
145     50                  55                  60
146 Ser Val Tyr Ile Leu Asn Leu Ala Gly Ala Asp Phe Leu Phe Leu His
147 65                  70                  75                  80
148 Ser Gln Phe Leu Phe Tyr Leu Leu Ala Ile Phe Pro Ser Ile Pro Ile
149                 85                  90                  95
150 Gln Ile Pro Leu Phe Phe Asp Met Leu Thr Lys Phe Ala Tyr Leu Ser
151             100                 105                 110
152 Gly Leu Ser Ile Leu Ser Thr Ile Ser Ile Glu Arg Cys Leu Cys Val
153         115                 120                 125
154 Met Trp Pro Ile Trp Tyr Arg Cys Gln Arg Pro Arg His Thr Ser Ser
155     130                 135                 140
156 Val Thr Cys Ser Leu Leu Trp Ala Leu Ser Leu Leu Phe Ala Leu Leu
157 145                 150                 155                 160
158 Asp Gly Met Gly Cys Gly Leu Leu Phe Asn Ser Phe Asp Gln Ser Trp
159                 165                 170                 175
160 Cys Leu Lys Phe Asp Leu Ile Ile Cys Ala Trp Ser Ile Val Leu Phe
161             180                 185                 190
```

RAW SEQUENCE LISTING DATE: 02/10/2002
PATENT APPLICATION: US/09/920,068A TIME: 13:06:11

Input Set : A:\50125.015002.SEQLIST.TXT
Output Set: N:\CRF3\02102002\I920068A.raw

```
Val Val Leu Cys Gly Ser Ser Leu Ile Leu Leu Val Arg Ile Phe Cys
        195                 200                 205
Gly Ser Gln Gln Ile Pro Val Thr Arg Leu Tyr Val Thr Ile Ala Leu
    210                 215                 220
Thr Val Leu Phe Phe Leu Ile Cys Cys Leu Pro Phe Gly Ile Ser Trp
225                 230                 235                 240
Ile Ile Gln Trp Ser Glu Thr Leu Ile Tyr Val Gly Phe Cys Asp Tyr
                245                 250                 255
Phe His Glu Glu Leu Phe Leu Ser Cys Ile Asn Ser Cys Ala Asn Pro
            260                 265                 270
Ile Ile Tyr Phe Leu Val Gly Phe Ile Arg Gln Arg Lys Phe Gln Gln
        275                 280                 285
Lys Ser Leu Lys Val Leu Leu Gln Arg Ala Met Glu Asp Thr Pro Glu
    290                 295                 300
Glu Glu Asn Glu Asp Met Gly Pro Ser Arg Asn Pro Glu Glu Phe Glu
305                 310                 315                 320
Thr Val Cys Ser Asn
                325
<210> SEQ ID NO: 4
<211> LENGTH: 330
<212> TYPE: PRT
<213> ORGANISM: Homo sapiens
<400> SEQUENCE: 4
Met Asp Pro Thr Thr Pro Ala Trp Gly Thr Glu Ser Thr Thr Val Asn
 1               5                  10                  15
Gly Asn Asp Gln Ala Leu Leu Leu Leu Cys Gly Lys Glu Thr Leu Ile
            20                  25                  30
Pro Val Phe Leu Ile Leu Phe Ile Ala Leu Val Gly Leu Val Gly Asn
        35                  40                  45
Gly Phe Val Leu Trp Leu Leu Gly Phe Arg Met Arg Arg Asn Ala Phe
    50                  55                  60
Ser Val Tyr Val Leu Ser Leu Ala Gly Ala Asp Phe Leu Phe Leu Cys
65                  70                  75                  80
Phe Gln Ile Ile Asn Cys Leu Val Tyr Leu Ser Asn Phe Phe Cys Ser
                85                  90                  95
Ile Ser Ile Asn Phe Pro Ser Phe Phe Thr Thr Val Met Thr Cys Ala
            100                 105                 110
Tyr Leu Ala Gly Leu Ser Met Leu Ser Thr Val Ser Thr Glu Arg Cys
        115                 120                 125
Leu Ser Val Leu Trp Pro Ile Trp Tyr Arg Cys Arg Arg Pro Arg His
    130                 135                 140
Leu Ser Ala Val Val Cys Val Leu Leu Trp Ala Leu Ser Leu Leu Leu
145                 150                 155                 160
Ser Ile Leu Glu Gly Lys Phe Cys Gly Phe Leu Phe Ser Asp Gly Asp
                165                 170                 175
Ser Gly Trp Cys Gln Thr Phe Asp Phe Ile Thr Ala Ala Trp Leu Ile
            180                 185                 190
Phe Leu Phe Met Val Leu Cys Gly Ser Ser Leu Ala Leu Leu Val Arg
        195                 200                 205
```

RAW SEQUENCE LISTING DATE: 02/10/2002
PATENT APPLICATION: US/09/920,068A TIME: 13:06:11

Input Set : A:\50125.015002.SEQLIST.TXT
Output Set: N:\CRF3\02102002\I920068A.raw

```
214 Ile Leu Cys Gly Ser Arg Gly Leu Pro Leu Thr Arg Leu Tyr Leu Thr
215     210                 215                 220
216 Ile Leu Leu Thr Val Leu Val Phe Leu Leu Cys Gly Leu Pro Phe Gly
217 225                 230                 235                 240
218 Ile Gln Trp Phe Leu Ile Leu Trp Ile Trp Lys Asp Ser Asp Val Leu
219                 245                 250                 255
220 Phe Cys His Ile His Pro Val Ser Val Val Leu Ser Ser Leu Asn Ser
221             260                 265                 270
222 Ser Ala Asn Pro Ile Ile Tyr Phe Phe Val Gly Ser Phe Arg Lys Gln
223         275                 280                 285
224 Trp Arg Leu Gln Gln Pro Ile Leu Lys Leu Ala Leu Gln Arg Ala Leu
225     290                 295                 300
226 Gln Asp Ile Ala Glu Val Asp His Ser Glu Gly Cys Phe Arg Gln Gly
227 305                 310                 315                 320
228 Thr Pro Glu Met Ser Arg Ser Ser Leu Val
229                 325                 330
232 <210> SEQ ID NO: 5
233 <211> LENGTH: 993
234 <212> TYPE: DNA
235 <213> ORGANISM: Mus musculus
237 <400> SEQUENCE: 5
238 atgggggaaa gcaatggtga agcatttctt gcctttaaga cctcagcctc accaacagca 60
239 ccagtgacaa caaatccaat ggacgaaacc ctccctggaa gtatcaacat taggattctg 120
240 atcccaaaat tgatgatcat catcttcgga ctggtcggac tgatgggaaa cgccattgtg 180
241 ttctggctcc tgggcttcca cttgcgcagg aatgccttct cagtctacat cctaaacttg 240
242 gccctggctg acttcctttt cctcctcagt agtatcatag cttccaccct gtttcttctc 300
243 aaagtttcct acctcagcat catctttcac ttgtgcttta acaccattat gatggttgtc 360
244 tacatcacag ggataagcat gctcagtgcc atcagcactg agtgctgcct gtctgtcctg 420
245 tgccccacct ggtatcgctg ccaccgtcca gtacatacat caactgtcat gtgtgctgtg 480
246 atctgggtcc tatccctgtt gatctgcatt ctgaatagct atttctgtgc tgtcttacat 540
247 accagatatg ataatgacaa tgagtgtctg gcaactaaca tctttaccgc ctcgtacatg 600
248 atatttttgc ttgtggtcct ctgtctgtcc agcctggctc tgctggccag gttgttctgt 660
249 ggcgctgggc agatgaagct taccagattt catgtgacca tcttgctgac ccttttggtt 720
250 tttctcctct gcgggttgcc ctttgtcatc tactgcatcc tgttattcaa gattaaggat 780
251 gatttccatg tattagatgt taatctttat ctagcattag aagtcctgac tgctattaac 840
252 agctgtgcca accccatcat ctacttcttc gtgggctctt tcagacatca gttgaagcac 900
253 cagaccctca aaatggttct ccagagtgca ctgcaggaca ctcctgagac agctgaaaac 960
254 atggtagaga tgtcaagtaa caaagcagag cct                              993
256 <210> SEQ ID NO: 6
257 <211> LENGTH: 966
258 <212> TYPE: DNA
259 <213> ORGANISM: Homo sapiens
261 <400> SEQUENCE: 6
262 atgaaccaga ctttgaatag cagtgggacc gtggagtcag ccctaaacta ttccagaggg 60
263 agcacagtgc acacggccta cctggtgctg agctccctgg ccatgttcac ctgcctgtgc 120
264 gggatggcag gcaacagcat ggtgatctgg ctgctgggct ttcgaatgca caggaacccc 180
265 ttctgcatct atatcctcaa cctggcggca gccgacctcc tcttcctctt cagcatggct 240
266 tccacgctca gcctggaaac ccagcccctg gtcaatacca ctgacaaggt ccacgagctg 300
267 atgaagagac tgatgtactt tgcctacaca gtgggcctga gcctgctgac ggccatcagc 360
```

Use of n and/or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY DATE: 02/10/2002
PATENT APPLICATION: **US/09/920,068A** TIME: 13:06:12

Input Set : **A:\50125.015002.SEQLIST.TXT**
Output Set: **N:\CRF3\02102002\I920068A.raw**

L:409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:410 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15